

WHAT IS CLAIMED IS:

1. A process for preparing bleached mechanical pulp having high brightness from wood chips comprising the steps of impregnating wood chips having low bleachability with a chemical liquor at a pH range of 7-12 and then removing the impregnated chemical liquor from the chips, followed by a sequential step of (a) defibration by primary refining, bleaching, and beating by secondary refining, or (b) defibration by primary refining, beating by secondary refining and bleaching.

2. The process for preparing mechanical pulp according to claim 1 characterized in that the impregnating chemical liquor is an aqueous solution of an alkaline inorganic compound and/or a chelating agent.

3. The process for preparing mechanical pulp according to claim 1 characterized in that the chemical impregnation step comprises compressing the chips at a compression ratio of 4:1-16:1 and releasing pressure to impregnate them with the chemical liquor and the step of removing the impregnated chemical liquor comprises compressing the chips impregnated with the chemical liquor at a compression ratio of 4:1-16:1 to drain the impregnated chemical liquor.

4. The process for preparing mechanical pulp according to claim 2 characterized in that the chemical impregnation step comprises compressing the chips at a compression ratio of 4:1-16:1 and releasing pressure to impregnate them with the chemical liquor and the step of removing the impregnated chemical liquor comprises compressing the chips

impregnated with the chemical liquor at a compression ratio of 4:1-16:1 to drain the impregnated chemical liquor.

5. The process for preparing mechanical pulp according to claim 1 characterized in that the wood chips are single chips or mixed chips of two or more of wood species having low bleachability selected from Larix, Pseudotsuga, Cryptomeria, Tsuga, Thuja and Pinus.

6. The process for preparing mechanical pulp according to claim 2 characterized in that the wood chips are single chips or mixed chips of two or more of wood species having low bleachability selected from Larix, Pseudotsuga, Cryptomeria, Tsuga, Thuja and Pinus.

7. The process for preparing mechanical pulp according to claim 3 characterized in that the wood chips are single chips or mixed chips of two or more of wood species having low bleachability selected from Larix, Pseudotsuga, Cryptomeria, Tsuga, Thuja and Pinus.

8. A process for preparing bleached mechanical pulp having high brightness comprising the steps of defibrating wood chips by primary refining, washing pulp fibers formed by defibration, bleaching the pulp fibers, and further beating them by secondary refining to give bleached mechanical pulp having a Hunter brightness of 45-65%.

9. The process for preparing mechanical pulp having high brightness according to claim 8 characterized in that the wood chips are single chips or mixed chips of two or more of hard bleaching wood species selected from Larix, Pseudotsuga, Cryptomeria, Tsuga, Thuja and Pinus.

10. The process for preparing mechanical pulp having high brightness according to claim 8 characterized in that the step of washing defibrated pulp comprises dilution with water at a temperature of 5-95°C and dehydration by a press on a filter and the washing efficiency is 52.6-99.2%.

11. The process for preparing mechanical pulp having high brightness according to claim 9 characterized in that the step of washing defibrated pulp comprises dilution with water at a temperature of 5-95°C and dehydration by a press on a filter and the washing efficiency is 52.6-99.2%.

12. The process for preparing mechanical pulp having high brightness according to claim 8 characterized in that the step of bleaching defibrated pulp after washing comprises single-stage bleaching with an oxidizing agent or a reducing agent.

13. The process for preparing mechanical pulp having high brightness according to claim 9 characterized in that the step of bleaching defibrated pulp after washing comprises single-stage bleaching with an oxidizing agent or a reducing agent.

14. The process for preparing mechanical pulp having high brightness according to claim 10 characterized in that the step of bleaching defibrated pulp after washing comprises single-stage bleaching with an oxidizing agent or a reducing agent.